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ABSTRACT

This supplementary report presents the final evaluation conducted to determine the effectiveness of 34 environmental curriculum units for grades K-6 that were developed by the Center for the Development of Environmental Curriculum. A preliminary evaluation consisting of in-class use and review was conducted in 1973. The final evaluation based on criteria established by ESEA IV included 54 teachers and 15 nonteachers who reviewed the environmental curriculum units. Teachers reviewing the material were provided with a packet pertinent to their grade level. All nonteachers received all 34 units. Each reviewer completed one questionnaire for each unit which consisted of 20 questions to be rated 1 (Strongly Agree) through 7 (Strongly Disagree). Based on the results, 31 units or 91.2 percent of the units successfully met all criteria. This supplementary report also contains 41 appendixes that include a further breakdown of the evaluation and other related materials. (Author/TK)

ED102027

CENTER FOR THE DEVELOPMENT OF ENVIRONMENTAL CURRICULUM

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PROJECT 45 - 71 - 215 - 3

REPORT OF THE EVALUATION OF THE ENVIRONMENTAL CURRICULUM MATERIALS FOR GRADES KINDERGARTEN THROUGH SIX

SUPPLEMENTARY REPORT TO THE PROJECT TERMINATION REPORT
FOR ESEA TITLE III GRANT FOR THE PERIOD BETWEEN
AUGUST 15, 1973 AND AUGUST 14, 1974

SUBMITTED
NOVEMBER 14, 1974
BY THE
WILLOUGHBY-EASTLAKE CITY SCHOOL DISTRICT

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An ESEA Title III Grant

Project No. 45 - 71 - 215 - 3

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I. INTRODUCTION

This Supplementary Report to the Project Termination Report presents the final evaluation conducted to determine the effectiveness of thirty-four environmental curriculum units for grades K-6 that were developed by the Center for the Development of Environmental Curriculum (CDEC).

The Center for the Development of Environmental Curriculum is an ESEA Title III project funded through the Willoughby-Eastlake City Schools for the purpose of developing an environmental curriculum for grades K-12 that has application for schools throughout Ohio. The 34 elementary environmental units were developed by CDEC between June, 1972 and November, 1972.

In order to obtain preliminary data regarding the quality of the elementary environmental materials, two evaluative methods were used. First, 69 classroom teachers participated in a pilot program during which time teachers taught several units in actual classroom situations. Teachers provided substantial evaluative data to CDEC regarding the teachability and appropriateness of the materials. The pilot program was conducted between October 7, 1972 and February 15, 1973. Secondly, 16 environmental experts reviewed the materials to determine validity of the content and to provide suggestions for improvement of the materials. The results of the two preliminary evaluation efforts were reported in the publication entitled "Summary of the Pilot, Evaluation, and Revision of the Elementary Curriculum Materials: Supplemental Report to the Second Continuation Application for ESEA Title III Grant for the period between August 15, 1973 and August 14, 1974," which was submitted on June 14, 1973 to the ESEA Title III Office in Columbus, Ohio. Following the preliminary evaluation, the elementary environmental materials were revised and submitted on May 1, 1973 to the Ohio Department of Education for printing and dissemination to elementary schools in Ohio. Dissemination began approximately March 15, 1974.

This report is concerned only with final evaluation conducted between April 1 and June 20, 1974. This evaluation effort is for the purpose of reviewing the 34 environmental units in their final revised form by a jury composed of teachers, administrators, environmental education consultants, and curriculum and instruction consultants.

II. EXPERIMENTAL DESIGN

The experimental design used in this evaluation was developed by Mr. Dennis M. Wint, Director of CDEC. Mr. Franklin S. Scott, Consultant for ESEA Title III and Mr. John Landis, Consultant for the Division of Planning and Evaluation, Ohio Department of Education provided valuable input.

Several criteria were established by ESEA Title III for this evaluation program:

1. The evaluation was required to involve teachers representing each grade range for which the materials were developed.
2. The evaluation was required to involve teachers representing urban, suburban, and rural communities.
3. The evaluation was required to involve environmental education consultants, curriculum and instruction consultants, and school administrators.
4. The evaluation was to be conducted prior to the completion of the grant period which ends August 14, 1974.
5. The total cost of the evaluation, which included honorariums to reviewers and the cost of printing and postage, was not to exceed $6,500.00

Based upon these criteria, a design was developed which included 54 teachers, 27 formally associated with CDEC in the pilot program and 27 teachers never formally associated with CDEC, and 15 non-teachers composed of administrators, curriculum and instruction consultants, and environmental education consultants.

During the phase of contacting reviewers, it became necessary to modify the design due to the unavailability of reviewers. A total of 67 participants review the elementary materials. Refer to Appendix I for both the "Original Proposal" and the "Design Used in the Evaluation."

Because of the late date by which the elementary environmental materials were available for use, it became apparent an evaluation under classroom situations would be impossible. Thus, the decision was made to involve educators in a jury process by which they evaluated the materials based upon a review rather than actual practice and use. For this same reason, no evaluation data was gathered on direct student impact of the materials.

Teachers reviewing the materials were provided with the package pertinent to their grade level. All non-teachers received all 34 units. The names of all reviewers are reported in Appendix II.

It should be mentioned that during the printing of the elementary environmental materials, the Ohio Department of Education printed only 27 of the 34 topics. One unit at grades 3-4, and six units at grades 5-6 were omitted from the final publications. These seven units were omitted for reasons of limited monies to print and disseminate all 34 units. Thus, CDEC printed copies of the seven omitted units for the evaluation purposes. These copies were made from the original type-written running copy editions prepared by CDEC. Titles of all of the elementary environmental units are listed in Appendix III.

Each reviewer was to complete one questionnaire for each unit to be evaluated. The questionnaire contained a list of twenty questions to be rated between 1 (Strongly Agree) and 7 (Strongly Disagree). Using this system of rating, it is possible to obtain an average score for each unit for each reviewer.

The last question on the questionnaire (Question #21) related to the general reaction of the reviewer to the unit, and required a rating of excellent, good, fair, or poor. A copy of the questionnaire is printed in Appendix IV. In addition, all correspondence sent to reviewers is also included in this appendix.

By obtaining an average response for each unit from each reviewer, it was possible to obtain a single numerical average for each title. This numerical average offers a simple method of obtaining data as to the quality of the unit. Question #21 provides a single verbal evaluation.

Based upon this scoring system, the following minimum acceptable criteria were established:

1. The total average response of all people reviewing a unit must be between 1.00 and 3.00.
2. Two-thirds of the individual responses of all people reviewing a unit must be between 1.00 and 3.00.
3. Two-thirds of all verbal responses from question #21 for a unit must be either excellent or good.

Scores related to all three criteria were computed for each title. For example, the numerical average of all persons reviewing the unit "Preparing for Seasonal Change: Fall" was 1.91. This figure was calculated by obtaining an average response for each reviewer, and then calculating an average response for all reviewers. Related to criteria #2, 96.9 percent of the ratings provided by the 32 reviewers were between 1.00 and 3.00, with only one person rating the unit between 3.01 and 7.00. For criteria #3, 93.8 percent of all ratings of question #21 were either excellent or good.

The results of each unit are reported on two charts, "Average Response and Distribution of Responses for the Jury" and "Correlation Between the Average Responses and the Quality Rating of Excellent, Good, Fair, or Poor by the Jury."

The first chart relates to "Average Responses and Distribution of Responses by Group" as described in the experimental design. It is thereby possible to compare responses and to analyze the range of score for each group reviewing a unit. The participants reviewing a unit are grouped as follows: teachers, school administrators (Adm.), curriculum and instruction experts (C & I), and environmental education experts (EE Experts).

The "In" and "Out" designation indicated prior involvement with CDEC. Those reviewers designated as "In" indicates that they have been formally involved with CDEC prior to this evaluation activity. "Teachers - In" were involved in the piloting of the first draft elementary curriculum materials. The "Adm. - In" were administrators of buildings in which piloting took place. The curriculum and instruction experts who assisted in the development of the elementary curriculum materials were "C & I - In."

All reviewers designated as "Out" had no prior formal involvement with CDEC. In a limited number of cases, they knew of the program, but had never seen any of the curriculum materials. The majority of cases, the "Out" reviewers had no contact with CDEC prior to their involvement.

"Teachers - Out" were selected by administrators of their district. CDEC contacted administrators of area schools representing the type of socio-cultural community needed for the evaluation. The administrators were informed of the project, and the grade levels for which teachers were needed to serve as reviewers. The local administrators then identified the teachers, and sent the names to CDEC. All teachers identified in this manner were sent materials for review.

The second chart compares the average response between teachers and non-teachers as related to their rating of question #21 on the basis of Excellent, Good, Fair, or Poor.

The necessity of this second chart became obvious during the analysis phase. As the original scoring was to be between one and seven rating with one meaning strongly agree and seven meaning strongly disagree, it was assumed the number four would be a neutral number, a "no opinion" rating. Responses of one, two, or three would be considered acceptable and responses of four, five, six, or seven as being unacceptable. The assumption was also made that if a reviewer found the unit acceptable on a numerical rating, the verbal rating would be either Excellent or Good.

Upon analysis of the data, it was determined that for any verbal rating, the numerical rating might range rather widely. For example, the total rating of Excellent for the unit "Preparing for Seasonal Change: Fall," ranges from between 1.00 to 2.50, with the mean Excellent rating being 1.49.

III. RESULTS:

A survey sheet for the units of each grade level is provided in Appendix V. The data is summarized by teachers, non-teachers, and for both groups.

Based upon the results, 31 units or 91.2 percent of the units successfully met all three criteria. Two units (Food Webs, grades K-2 and Pond Succession, grades 5-6) successfully met criteria #1 and #2, but did not meet criteria #3. The rating for criteria #3 for Food Webs and Pond Succession was 56.3 percent and 61.3 percent respectively. One unit (The Endangered Predator, grades 3-4) successfully met criteria #1, but not criteria #2 and #3. The results for criteria #2 and #3 were 60.0 percent and 37.9 percent respectively.

Because both teachers and non-teachers were involved in this evaluation, the data was analyzed to determine if the curriculum materials were equally acceptable to both groups. Acceptability was determined by comparing the scores of the three criteria as reported in Appendix V.

For the units for grades K-2, the teachers found the materials more acceptable than the non-teachers for all three criteria. The results are presented below:

	Teachers	Non-teachers	Total Average
Average rating of all units for criteria #1	1.92	2.10	2.01
Average rating of all units for criteria #2	91.5%	83.4%	87.8%
Average rating for all units for criteria #3	86.1%	80.4%	83.5%

	No. units which teachers found more acceptable than non-teachers.	No. units which non-teachers found more acceptable than teachers.
Criteria #1	6	3
Criteria #2	8	1
Criteria #3	7	2

For the units for grades 3-4, teachers again found the materials more acceptable than non-teachers. The results are presented below:

	Teachers	Non-teachers	Total Average
Average rating of all units for criteria #1	2.01	2.17	2.08
Average rating of all units for criteria #2	85.7%	79.9%	83.2%
Average rating for all units for criteria #3	81.4%	72.3%	77.1%

	No. units which teachers found more acceptable than non-teachers.	No. units which non-teachers found more acceptable than teachers.
Criteria #1	9	2
Criteria #2	9	2
Criteria #3	9	2

For the units for grades 5-6, the pattern reversed itself as the non-teachers found the materials more acceptable than the teachers. The results are reported below:

	Teachers	Non-teachers	Total Average
Average rating of all units for criteria #1	2.09	2.02	2.06
Average rating of all units for criteria #2	83.7%	87.2%	85.7%
Average rating for all units for criteria #3	80.2%	81.8%	80.9%

	No of units which teachers found more acceptable than non-teachers.	No. of units which non-teachers found more acceptable than teachers
Criteria #1	5	9
Criteria #2	6	8
Criteria #3	5	9

In order to obtain a further breakdown of the evaluation data, each unit is analyzed in Appendices VI to XXXIX. The appendix cover sheets are color coded to assist in locating grade levels as follows:

grades K-2	pink
grades 3-4	blue
grades 5-6	green

The order of the units is the same as the order in Appendix III. The Table of Contents for Appendices is also helpful in locating evaluative data for specific titles.

Although not requested to do so, many reviewers returned a letter summarizing their evaluation of the elementary curriculum materials. These comments offer additional insight as to the quality of the kindergarten through six curriculum. All unsolicited letters are presented in Appendix XL.

Because the Ohio Department of Education omitted seven units from the final printed package of Environmental Learning Experiences, further analysis was conducted to determine if there was a difference between the quality of the units included in the package as compared to the units omitted. Appendix XLI reports the comparisons.

For the one unit (Man's Adaptation) omitted from the package for grades 3-4, the unit was found slightly less acceptable than the ten printed units. As can be seen from the data, the teachers evaluated this one unit equal in quality to the other ten units, whereas the non-teachers indicated it was of substantially lower quality than the others. This lower rating by the non-teachers is the reason for the overall lower rating.

The same analysis was conducted for the six units omitted from the Environmental Learning Experiences for grades 5-6. The average ratings for these omitted units were almost the same as the average ratings for the eight units included in the package. Teachers evaluated the six omitted units slightly higher quality than the eight units included in the package, whereas the non-teachers rated the six units equal to or slightly lower quality.

CONCLUSION:

As a total curriculum package, the environmental curriculum materials for grades K-6 provide an acceptable quality product to further environmental concepts in the elementary classroom. Of the 34 units prepared, 31 units (91.2 percent) met all three criteria of acceptance. Two units (5.9 percent) met two of the three criteria, and are also of value to teachers. One unit (2.9 percent) met only one of the three criteria, and is probably of little value in its present state.

Teachers in grades K-2 and grades 3-4 found the curriculum materials for this level more acceptable than the non-teachers, whereas teachers for grades 5-6 evaluated the materials less acceptable than the non-teachers.

Based upon an analysis of the units printed verses those omitted from the printed package, the omitted units are of equal quality as those printed, and that their omission from the printed package should not imply unacceptability. In the event of future printings of the elementary curriculum materials, it is suggested that the seven unpublished titles be included in future editions.

APPENDIX I

EVALUATION DESIGN FOR THE ELEMENTARY ENVIRONMENTAL MATERIALS

ORIGINAL PROPOSAL

DESIGN USED IN THE EVALUATION

APPENDIX II

MEMBERS OF THE JURY WHO REVIEWED AND EVALUATED THE ELEMENTARY CURRICULUM MATERIALS

EVALUATION DESIGN OF THE ELEMENTARY CURRICULUM MATERIALS

Original Proposal

	grades K-2			grades 3-4			grades 5-6			
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural	Total
Teachers										
In Pilot	3	3	3	3	3	3	3	3	3	27
Not in Pilot	3	3	3	3	3	3	3	3	3	27
Administrators										
In Pilot			2							2
Not in Pilot			3							3
Curriculum and Instruction Consultants										
Associated with Program			2							2
Not Assoc. with Program			3							3
Environmental Education Consultants			5							5
										69

EVALUATION DESIGN OF THE ELEMENTARY CURRICULUM MATERIALS

Design Used in the Evaluation

	grades K-2			grades 3-4			grades 5-6			
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural	Total
Teachers										
In Pilot	2	2	2	3	2	1	2	4	2	20
Not in Pilot	3	3	5	4	3	3	5	3	3	32
Administration										
In Pilot			2							2
Not in Pilot			3							3
Curriculum and Instruction Consultants										
Associated with Program			2							2
Not Assoc. with Program			3							3
Environmental Education Consultants			5							5
										67

NOTE: NUMBERS INDICATE NUMBER OF PERSONS PER CELL.

Teachers Reviewing Environmental Materials for Grades Kindergarten to Two:

URBAN COMMUNITIES - PARTICIPATED IN THE PILOT PROGRAM

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Charles Dickens Elementary School
Cleveland City Schools
Cleveland, Ohio

Mrs. Mae Garrett

Second Grade Teacher
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Cleveland, Ohio

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East Cleveland, Ohio

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East Cleveland, Ohio

Ms. Susan Hall

Second Grade Teacher
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East Cleveland City Schools
East Cleveland, Ohio

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Willoughby, Ohio

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Willoughby, Ohio

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Second Grade Teacher
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Chardon Local Schools
Chardon, Ohio

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Chardon, Ohio

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Second Grade Teacher
Chardon Local Schools
Chardon, Ohio

Miss Mary Lou Larimer

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Teachers Reviewing Environmental Materials for Grades Three and Four:

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Louise M. Alcott Elementary School
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Cleveland, Ohio

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Willoughby, Ohio

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SUBURBAN COMMUNITIES - DID NOT PARTICIPATE IN PILOT PROGRAM

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Edison Elementary School
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Willoughby, Ohio

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Third Grade Teacher
Washington Elementary School
Willoughby-Eastlake City Schools
Willoughby, Ohio

RURAL COMMUNITIES - PARTICIPATED IN PILOT PROGRAM

Ms. Martha Burton

Fourth Grade Teacher
Jefferson Elementary School
Jefferson Area Schools
Jefferson, Ohio

RURAL COMMUNITIES - DID NOT PARTICIPATE IN PILOT PROGRAM

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Third Grade Teacher
Chardon Local Schools
Chardon, Ohio

Mrs. Helen Thomas

Fourth Grade Teacher
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Mrs. Carol Wilt

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Cleveland, Ohio

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APPENDIX III

TITLES OF THE ELEMENTARY ENVIRONMENTAL UNITS

TITLES OF THE ELEMENTARY ENVIRONMENTAL UNITS
PREPARED BY THE
CENTER FOR THE DEVELOPMENT OF ENVIRONMENTAL CURRICULUM

Units for Grades K-2

Trees
The Terrarium
Dirt and Stuff
Preparing for Seasonal Change: Fall
Birds in our Lives
Kittens
Food Chains
Food Webs
Trash

Units for Grades 3-4

An Environmental Quality Index for the School and Neighborhood
* Man's Adaptation
The Vacant Lot
The School Lawn
The Cemetery
Giants on the Land: Trees in Your Environment
Water
The Breath of Life or Death - Air Pollution
Wild Ideas With Wild Plants
The Endangered Predator and His Prey
Poetry in the Environment

Units for Grades 5-6

Problem Solving
Succession and the Pond Community
* Field and Forest Succession
* Weather and Climate
* Minerals
Animals and Their Habitat
* Soil and Erosion
Our Native Lands: Conserve and Preserve
Scars Upon the Land
Water: Life-Blood of the Earth
* Air Pollution (Part I)
* Air Pollution (Part II)
Noise Pollution
How to Plan a Cleanup Campaign in the Local Community

* Titles not printed in the final editions published by the Ohio Department of Education.

APPENDIX IV

QUESTIONNAIRE FOR UNIT EVALUATION

CORRESPONDENCE ORIGINATING FROM PROJECT OFFICE RELATED TO EVALUATION

UNIT EVALUATION

Reviewer's Name

Unit Name

Level

Please complete one questionnaire for each unit you review. The following questions are to be answered by circling a number between 1 and 7. Number 1 indicates that you strongly agree with the statement, and number 7 indicates strong disagreement. Whenever appropriate, you may write detailed comments in the space provided, or on the back of the questionnaire.

Please return by MAY 10, 1974.

		Strongly Agree						Strongly Disagree
1.	The rationale covers the whole unit.	1	2	3	4	5	6	7
2.	The unit is adaptable to three types of communities. (urban, suburban, rural)	1	2	3	4	5	6	7
3.	The objectives are brief, clear, and concise.	1	2	3	4	5	6	7
4.	The objectives are appropriate and realistic for students.	1	2	3	4	5	6	7
5.	Sufficient activities are included for achieving the objectives.	1	2	3	4	5	6	7
6.	Sufficient content material exists in the unit.	1	2	3	4	5	6	7
7.	The content is accurate.	1	2	3	4	5	6	7
8.	The format is easy to use.	1	2	3	4	5	6	7
9.	There are sufficient directions for the teacher.	1	2	3	4	5	6	7
10.	Different teaching methods can be employed.	1	2	3	4	5	6	7
11.	The material is suitable for the grade level designated.	1	2	3	4	5	6	7
12.	It is relatively simple to adapt the material to a class.	1	2	3	4	5	6	7

Strongly Agree — Strongly Disagree

13. The books and periodicals in the bibliography section are sufficient to provide the teacher with additional information. 1 2 3 4 5 6 7

14. The unit is exciting or fun to teach. 1 2 3 4 5 6 7

15. I would teach the unit next year. 1 2 3 4 5 6 7

16. Positive environmental values are promoted by the unit. 1 2 3 4 5 6 7

17. There are sufficient whole class activities. 1 2 3 4 5 6 7

18. There are sufficient small group activities. 1 2 3 4 5 6 7

19. There are sufficient individual activities. 1 2 3 4 5 6 7

20. The unit helps the student to learn about the relationships existing between man and his environment. 1 2 3 4 5 6 7

21. What is your general reaction to the unit?
Please circle: Excellent Good Fair Poor

COMMENTS:

PLEASE RETURN TO:

Dennis M. Wint, Director
Center for the Development of Environmental Curriculum
4284 Center Street
Willoughby, Ohio 44094

CENTER FOR THE DEVELOPMENT
OF ENVIRONMENTAL CURRICULUM

Dennis M. Wint, Director
4284 Center Street
Willoughby, Ohio 44094
(216) 946-5000 Ext.358

March 27, 1974

By now, you should have received the printed editions of the environmental curriculum materials which you helped develop. I hope you feel your effort and contribution was of value and professionally rewarding.

Now that the final product has been printed, CDEC has been requested to conduct an extensive follow-up evaluation of the materials. I am writing to you to determine if you may be interested in participating in this evaluative effort.

Each participating teacher will review the packet of materials applicable to his/her grade level. You would be requested to complete one questionnaire for the total grade level packet, and one questionnaire for each of the unit titles. In return for your contribution, a fee of $5.00 per unit will be paid.

The rates for teachers would be as follows:

grades K - 2 - 9 units at $5.00 each = $45.00
grades 3 - 4 - 11 units at $5.00 each = $55.00
grades 5 - 6 - 14 units at $5.00 each = $70.00

Since my letter of March 14, I learned the reason the one unit at grades 3 - 4 and six units at grades 5 - 6 were omitted. The Ohio Department of Education, who coordinated all printing and publishing of the materials, did not have sufficient monies in their publication budget to print all the units. Thus, no inference should be made as to the quality of the seven units omitted.

Sponsored by an ESEA Title III grant contracted through the Willoughby-Eastlake City Schools

Would you please return the attached sheet by April 5, 1974, indicating whether or not you wish to participate in this evaluative effort.

Should you agree to participate, the necessary materials, questionnaires, and directions will be sent to you about April 12. You are requested to return your completed evaluative forms by May 1, 1974.

If you have any questions or are in need of additional information, please feel free to contact me.

Sincerely,

Dennis M. Wint

Dennis M. Wint
Director

DMW:am
Enclosure

CENTER FOR THE DEVELOPMENT OF ENVIRONMENTAL CURRICULUM

4284 Center Street
Willoughby, Ohio 44094

Ph: (216) 946-1223

________ I wish to participate in the evaluation of the elementary curriculum materials.

________ I do not wish to participate in this evaluative effort.

____
Name

____
Mailing Address

____
Telephone Number

______________________	______________________
Position Title	Grade Level
______________________	______________________
School District	Building Assignment

PLEASE RETURN BY APRIL 5, 1974

CENTER FOR THE DEVELOPMENT
OF ENVIRONMENTAL CURRICULUM

Dennis M. Wint, Director
4284 Center Street
Willoughby, Ohio 44094
(216) 946-5000 Ext.358

Because you agreed to participate in the evaluation of the elementary environmental curriculum materials, I wanted to inform you of the next stage of events. The elementary units you will be reviewing, and the necessary directions and questionnaires will be mailed under separate cover on April 17, 1974.

This mailing is somewhat later than the date I originally mentioned. The ESEA Title III Office in Columbus recently requested several reports which preempted many other activities, including the mailing of the elementary curriculum materials.

Because of this later mailing, you will receive an additional 10 days for review. Thus, I would be appreciative if you could complete and return your questionnaire by May 10, 1974.

You might be interested in knowing that 65 educators are participating in this evaluative effort. The participants are represented as follows:

Elementary teachers not previously involved with CDEC . . .	27
Elementary teachers with prior involvement with CDEC. . . .	23
School administrators	5
Curriculum and instruction experts.	5
Environmental education experts	5

If you have any questions, please feel free to contact me.

Sincerely,

Dennis M. Wint

Dennis M. Wint
Director

DMW:am

Sponsored by an ESEA Title III grant contracted through the Willoughby-Eastlake City Schools

CENTER FOR THE DEVELOPMENT
OF ENVIRONMENTAL CURRICULUM

Dennis M. Wint, Director 4284 Center Street Willoughby, Ohio 44094
(216) 946-5000 Ext.358

April 17, 1974

Dear Colleague:

Enclosed, please find copies of the elementary environmental units assigned to you.

Please complete one questionnaire for each unit you review. Questionnaires are to be returned by May 10, 1974. You may keep the units.

Whenever appropriate, please feel free to make comments in the space provided or on the back of the questionnaire.

The Environmental Learning Experiences were designed to be used as teacher resource guides rather than student materials. In only limited examples are student materials included, and these are primarily in the form of work sheets.

Because the materials are designed for the teachers, objectives are stated in instructional form as compared to behavioral form. Thus, teachers wishing to evaluate the progress of the students must translate the instructional objectives into behavioral forms. In addition, teachers must develop their own test, as none are included in the packet. Instruments were purposely omitted because of the difficulty and expense of developing and validating so many tests.

Several questions may be difficult to respond to without having taught the unit. Please respond based upon your reaction.

Reviewers of units for grades 3-4 and grades 5-6 will have copies of units not published by the Ohio Department of Education. The omission of these units in the first printing was the result of insufficient funds to print and disseminate the entire package. No inference should be made as to the quality of the units. Should the evaluation indicate that the units are of a high quality, they will be included in the next printing.

Development History

The elementary environmental units were initially written by members of the CDEC staff. Between October 1, 1972 and February 15, 1973, 70 classroom teachers from schools in Northeastern Ohio piloted the materials in their classrooms and provided evaluative data in areas such as teachability and ease of adaption to different abilities of students. Simultaneous with the pilot program, environmental experts from Ohio and neighboring states reviewed and evaluated the first draft editions.

Sponsored by an ESEA Title III grant contracted through the Willoughby-Eastlake City Schools

During March and April, 1973, the CDEC staff, with assistance from 20 classroom teachers revised the environmental units based upon the comments of the pilot teachers and the environmental experts. The final edition was completed on May 1, 1973.

Because CDEC was originally identified as a research and development project, no monies were allocated for printing and publishing. The Ohio Department of Education (ODE) assumed the responsibility of printing and dissemination of the elementary materials. With only limited exceptions, the editions published by ODE are the same as those submitted by CDEC.

If you have any further questions, please do not hesitate to contact me.

Sincerely,

Dennis M. Wint

Dennis M. Wint
Director

DMW/sms
Enclosure

APPENDIX V

ELEMENTARY EVALUATION RESULTS

SUMMARY OF DATA FOR EACH UNIT BY GRADE LEVEL

GRADES K-2

GRADES 3-4

GRADES 5-6

ELEMENTARY EVALUATION RESULTS

SUMMARY OF DATA OF UNITS FOR GRADES KINDERGARTEN THROUGH SECOND

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	TEACHERS			NON-TEACHERS			TOTAL		
TITLES	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd
Preparing for Seasonal Change: Fall	1.79	100.0	100.0	2.04	93.3	93.3	1.91	96.9	93.8
The Terrarium	1.70	94.1	100.0	2.04	80.0	86.7	1.86	87.5	93.8
Dirt and Stuff	1.71	94.1	94.1	1.86	93.3	93.3	1.78	93.8	96.9
Trees	1.62	94.1	87.5	2.16	86.7	80.0	1.87	90.6	83.9
Birds in Our Lives	1.66	100.0	94.1	2.13	78.6	78.6	1.87	90.3	87.1
Kittens	1.70	100.0	87.5	2.07	85.7	71.4	1.86	93.5	80.0
Food Chains	2.35	82.4	70.6	2.12	73.3	80.0	2.24	78.1	75.0
Food Webs	2.66	70.6	@ 58.8	2.54	66.7	@ 53.3	2.61	68.8	@ 56.3
Trash	2.11	88.2	82.4	1.98	93.3	86.7	2.05	90.6	84.4
Average Rating	1.92	91.5	86.1	2.10	83.4	80.4	2.01	87.8	83.5

@ INDICATES UNACCEPTABLE . 'G

ELEMENTARY EVALUATION RESULTS

SUMMARY OF DATA OF UNITS FOR GRADES THREE AND FOUR

BEST COPY AVAILABLE

	TEACHERS			NON-TEACHERS			TOTAL		
	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd
An Environmental Quality Index for the School and Neighborhood	1.71	93.3	93.3	2.08	78.6	78.6	1.89	89.7	86.2
* Man's Adaptation	2.04	86.7	80.0	2.41	71.4	@ 57.1	2.22	79.3	69.0
The Vacant Lot	2.20	75.0	68.8	2.31	85.7	71.4	2.25	80.0	70.0
The School Lawn	1.85	93.8	93.3	1.93	85.7	100.0	1.88	90.0	96.6
The Cemetery	2.37	75.0	80.0	2.23	78.6	71.4	2.30	76.7	75.9
Giants on the Land: Trees in Your Environment	1.41	100.0	87.5	1.83	78.6	78.6	1.58	90.0	83.3
Water	2.26	75.0	81.3	2.41	71.4	@ 57.1	2.33	73.3	70.0
The Breath of Life or Death: Air Pollution	1.73	100.0	93.3	1.81	100.0	85.7	1.77	100.0	89.7
Wild Ideas With Wild Plants	1.85	93.8	86.7	2.05	85.7	78.6	1.94	90.0	82.8
The Endangered Predator and His Prey	2.89	@ 62.5	@ 43.8	2.76	@ 57.1	@ 30.8	2.83	@ 60.0	@ 37.9
Poetry in the Environment	1.83	87.5	87.5	2.03	85.7	85.7	1.92	86.7	86.7
Average Rating	2.01	85.7	81.4	2.17	79.9	72.3	2.08	83.2	77.1

* INDICATES TITLES OF UNITS NOT PRINTED BY THE OHIO DEPARTMENT OF EDUCATION.

@ INDICATES UNACCEPTABLE RATING

SUMMARY OF DATA OF UNITS FOR GRADES FIVE AND SIX

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	TEACHERS			NON-TEACHERS			TOTAL		
	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd
Problem Solving	2.10	77.8	72.2	2.42	71.4	78.6	2.24	75.0	75.0
Succession and the Pond Community	2.51	72.2	72.2	2.54	@ 64.3	@ 46.2	2.53	75.0	@ 61.3
* Field and Forest Succession	2.36	72.2	68.8	2.16	85.7	78.6	2.27	78.1	73.3
* Weather and Climate	1.61	100.0	100.0	1.89	92.9	71.4	1.73	96.9	87.5
* Minerals	2.21	77.8	83.3	2.41	71.4	@ 50.0	2.30	75.0	68.8
Animals and Their Habitat	1.67	94.4	94.4	1.82	92.9	92.9	1.74	93.8	93.8
* Soil and Erosion	2.15	83.3	82.4	1.88	92.3	92.3	2.04	87.1	86.7
Our Native Lands: Conserve and Preserve	2.07	77.8	66.7	1.83	92.9	92.9	1.97	84.4	78.1
Scars Upon the Land	2.54	72.2	@ 61.1	2.34	92.9	92.9	2.46	81.3	75.0
Water: Life-Blood of the Earth	2.02	88.9	77.8	1.80	92.9	92.9	1.92	90.6	84.4
* Air Pollution: Part I	1.88	88.9	88.9	1.78	92.9	92.9	1.83	90.6	90.6
* Air Pollution: Part II	2.23	83.3	83.3	1.94	78.6	78.6	2.10	81.3	81.3
Noise Pollution	1.91	88.9	82.4	1.67	100.0	92.3	1.81	93.8	86.7
How to Plan a Cleanup Campaign in the Local Community	2.03	94.4	88.9	1.80	100.0	92.9	1.93	96.9	90.6
Average Rating	2.09	83.7	80.2	2.02	87.2	81.8	2.06	85.7	80.9

* INDICATES TITLES OF UNITS NOT PRINTED BY THE OHIO DEPARTMENT OF EDUCATION

@ INDICATES UNACCEPTABLE RATING

APPENDIX VI

PREPARING FOR SEASONAL CHANGE - FALL

K-2

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level

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Preparing for Seasonal Change:
Fall K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.03	2											
Urban - Out	3	1.98	1		2									
Suburb - In	2	2.10	1			1								
Suburb - Out	3	2.37	1			2								
Rural - In	2	1.75		2										
Rural - Out	5	1.54	2	3										
Total/Aver.	17	1.79	7	5	2	3								
NON-TEACHERS														
Adm - In	2	2.18			2									
Adm - Out	3	1.87	1	1		1								
C&I - In	2	2.50			2									
C&I - Out	3	1.88	1	1		1								
EE Experts	5	1.99	2		2		1							
Total/Aver.	15	2.04	4	2	6	2	1							
TOTAL/AVER. - ALL	32	1.91	11	7	8	5	1							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 96.9%

Title and Grade Level
Preparing for Seasonal Change: Fall
K/2

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	8	7	1										
Good	8		4	2	2								
Fair	1				1								
Poor													
No Rating													
Total	17	7	5	2	3								
NON-TEACHERS													
Excellent	8	4	2	2									
Good	6			4	2								
Fair	1					1							
Poor													
No Rating													
Total	15	4	2	6	2	1							
TOTAL													
Excellent	16	11	3	2									
Good	14		4	6	4								
Fair	2				1	1							
Poor													
No Rating													
Total	32	11	7	8	5	1							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 96,9%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 93.8%

APPENDIX VII

THE TERRARIUM

K-2

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Terrarium - K/2

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	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.00	2											
Urban - Out	3	1.80	1	1	1									
Suburb - In	2	1.78	1		1									
Suburb - Out	3	2.60		1	1			1						
Rural - In	2	1.23	2											
Rural - Out	5	1.55	3		2									
Total/Aver.	17	1.70	9	2	5			1						
NON-TEACHERS														
Adm - In	2	3.16					2							
Adm - Out	3	1.58	2		1									
C&I - In	2	1.85		1	1									
C&I - Out	3	1.95	1		1	1								
EE Experts	5	2.01	2	1	1			1						
Total/Aver.	15	2.04	5	2	4	1	2	1						
TOTAL/AVER. - ALL	32	1.86	14	4	9	1	2	2						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 87.5%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Terrarium - K/2

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	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	10	9	1										
Good	7		1	5			1						
Fair													
Poor													
No Rating													
Total	17	9	2	5			1						
NON-TEACHERS													
Excellent	10	5	1	3		1							
Good	3		1	1			1						
Fair	2				1	1							
Poor													
No Rating													
Total	15	5	2	4	1	2	1						
TOTAL													
Excellent	20	14	2	3		1							
Good	10		2	6			2						
Fair	2				1	1							
Poor													
No Rating													
Total	32	14	4	9	1	2	2						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 87.5%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 93.8%

APPENDIX VIII

DIRT AND STUFF

K-2

40 A

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Dirt and Stuff - K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.00	2											
Urban - Out	3	1.88		2	1									
Suburb - In	2	2.08	1			1								
Suburb - Out	3	2.18	1	1			1							
Rural - In	2	1.35	1	1										
Rural - Out	5	1.60	1	4										
Total/Aver.	17	1.71	6	8	1	1	1							
NON-TEACHERS														
Adm - In	2	1.16	2											
Adm - Out	3	1.27	2	1										
C&I - In	2	2.65			1	1								
C&I - Out	3	1.76	1	1	1									
EE Experts	5	2.23	1	2		1		1						
Total/Aver.	15	1.86	6	4	2	2		1						
TOTAL/AVER. - ALL	32	1.78	12	12	3	3	1	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93.8

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Dirt and Stuff - K/2

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	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	7	5	2										
Good	9	1	5	1	1	1							
Fair	1		1										
Poor													
No Rating													
Total	17	6	8	1	1	1							
NON-TEACHERS													
Excellent	10	6	3		1								
Good	4		1	2	1								
Fair	1						1						
Poor													
No Rating													
Total	15	6	4	2	2		1						
TOTAL													
Excellent	17	11	5		1								
Good	13	1	6	3	2	1							
Fair	2		1				1						
Poor													
No Rating													
Total	32	12	12	3	3	1	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93.8%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 96.9%

APPENDIX IX

TREES

K-2

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Trees - K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1,11	2											
Urban - Out	3	1,52	2	1										
Suburb - In	2	2,18	1				1							
Suburb - Out	3	1,87	1	1	1									
Rural - In	2	1,08	2											
Rural - Out	5	1,74	3	1		1								
Total/Aver.	17	1,62	11	3	1	1	1							
NON-TEACHERS														
Adm - In	2	2,02	1			1								
Adm - Out	3	1,70	2			1								
C&I - In	2	3,95				1					1			
C&I - Out	3	1,66	1	1	1									
EE Experts	5	2,08	2	1	1			1						
Total/Aver.	15	2,16	6	2	2	3		1			1			
TOTAL/AVER. - ALL	32	1.87	17	5	3	4	1	1			1			

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Trees - K/2

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	11	8	2	1									
Good	3	2	1										
Fair	2				1	1							
Poor													
No Rating	1	1											
Total	17	11	3	1	1	1							
NON-TEACHERS													
Excellent	10	5	2	2	1								
Good	2	1			1								
Fair	2				1		1						
Poor	1									1			
No Rating													
Total	15	6	2	2	3		1			1			
TOTAL													
Excellent	21	13	4	3	1								
Good	5	3	1		1								
Fair	4				2	1	1						
Poor	1									1			
No Rating	1	1											
Total	32	17	5	3	4	1	1			1			

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 83.4%

APPENDIX X

BIRDS IN OUR LIVES

K-2

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Birds In Our Lives - K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.53	1	1										
Urban - Out	3	1.43	1	2										
Suburb - In	2	1.83	1			1								
Suburb - Out	3	2.20	1			2								
Rural - In	2	1.18	2											
Rural - Out	5	1.57	2	1	1	1								
Total/Aver.	17	1.66	8	4	1	4								
NON-TEACHERS														
Adm - In	2	1.91		1	1									
Adm - Out	3	1.30	2	1										
C&I - In	1	4.06							1					
C&I - Out	3	2.23	1	1				1						
EE Experts	5	2.26	1	1	2		1							
Total/Aver.	14	2.13	4	4	3		1	1	1					
TOTAL/AVER. - ALL	31	1.87	12	8	4	4	1	1	1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.3%

Title and Grade Level
Birds In Our Lives - K/2

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	10	7	2		1								
Good	6	1	2	1	2								
Fair	1				1								
Poor													
No Rating													
Total	17	8	4	1	4								
NON-TEACHERS													
Excellent	9	4	4	1									
Good	2			2									
Fair	2					1	1						
Poor	1							1					
No Rating													
Total	14	4	4	3		1	1	1					
TOTAL													
Excellent	19	11	6	1	1								
Good	8	1	2	3	2								
Fair	3				1	1	1						
Poor	1							1					
No Rating													
Total	31	12	8	4	4	1	1	1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.3%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 87.1%

APPENDIX XI

KITTENS

K-2

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level

Kittens - K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.00	2											
Urban - Out	3	1.47	2	1										
Suburb - In	2	1.75	1		1									
Suburb - Out	3	2.32			2	1								
Rural - In	2	1.73	1		1									
Rural - Out	5	1.71	2	2	1									
Total/Aver.	17	1.70	8	3	5	1								
NON-TEACHERS														
Adm - In	2	1.60	1	1										
Adm - Out	3	1.07	3											
C&I - In	2	3.32			1				1					
C&I - Out	3	2.51		1		2								
EE Experts	4	2.09	1	2			1							
Total/Aver.	14	2.07	5	4	1	2	1		1					
TOTAL/AVER. - ALL	31	1.86	13	7	6	3	1		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93.5%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Kittens - K/2

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	8	7		1									
Good	6	1	3	1	1								
Fair	2			2									
Poor													
No Rating	1			1									
Total	17	8	3	5	1								
NON-TEACHERS													
Excellent	9	4	4	1									
Good	1	1											
Fair	2				1	1							
Poor	2				1			1					
No Rating													
Total	14	5	4	1	2	1		1					
TOTAL													
Excellent	17	11	4	2									
Good	7	2	3	1	1								
Fair	4			2	1	1							
Poor	2				1			1					
No Rating	1			1									
Total	31	13	7	6	3	1		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93,5%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 80%

APPENDIX XII

FOOD CHAINS

K-2

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Food Chains - K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	2.05		1		1								
Urban - Out	3	2.65		1		1	1							
Suburb - In	2	1.73	1		1									
Suburb - Out	3	3.38		1					2					
Rural - In	2	1.65	1		1									
Rural - Out	5	2.19	1	1	2	1								
Total/Aver.	17	2.35	3	4	4	3	1		2					
NON-TEACHERS														
Adm - In	2	2.41	1				1							
Adm - Out	3	1.38	2	1										
C&I - In	2	2.45	1				1							
C&I - Out	3	1.90	1		1	1								
EE Experts	5	2.43	1		2		1	1						
Total/Aver.	15	2.12	6	1	3	1	3	1						
TOTAL/AVER. - ALL	32	2.24	9	5	7	4	4	1	2					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 78.1%

APPENDIX XIII

FOOD WEBS

K-2

50A

Title and Grade Level
Food Chains - K/2

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	2	2											
Good	10	1	4	4	1								
Fair	5				2	1		2					
Poor													
No Rating													
Total	17	3	4	4	3	1		2					
NON-TEACHERS													
Excellent	7	6	1										
Good	5			3		2							
Fair	3				1	1	1						
Poor													
No Rating													
Total	15	6	1	3	1	3	1						
TOTAL													
Excellent	9	8	1										
Good	15	1	4	7	1	2							
Fair	8				3	2	1	2					
Poor													
No Rating													
Total	32	9	5	7	4	4	1	2					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 78.1%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 75.0%

[redacted] [redacted] [redacted] AV[redacted]GE [redacted]ONS[redacted]ND [redacted]TRI[redacted]ON [redacted]EST[redacted]ES [redacted]THE[redacted]RY [redacted] [redacted] [redacted]le [redacted]Gr[redacted]Lev[redacted] [redacted]

Food Webs - K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.35	1	1										
Urban - Out	3	3.85				1		1		1				
Suburb - In	2	2.43		1			1							
Suburb - Out	3	3.72				1			2					
Rural - In	2	2.33			2									
Rural - Out	5	2.09	1	1	2	1								
Total/Aver.	17	2.66	2	3	4	3	1	1	2	1				
NON-TEACHERS														
Adm - In	2	2.18			2									
Adm - Out	3	2.25	1		1		1							
C&I - In	2	3.44					1	1						
C&I - Out	3	2.25	1			2								
EE Experts	5	2.68	1		1	1	1	1						
Total/Aver.	15	2.54	3		4	3	3	2						
TOTAL/AVER. - ALL	32	2.61	5	3	8	6	4	3	2	1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 68.8%

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Food Webs - K/2

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	1	1											
Good	9	1	3	3	1	1							
Fair	5			1	2			2					
Poor	2						1		1				
No Rating													
Total	17	2	3	4	3	1	1	2	1				
NON-TEACHERS													
Excellent	3	1		2									
Good	5	1		2	1	1							
Fair	6	1			2	1	2						
Poor	1					1							
No Rating													
Total	15	3		4	3	3	2						
TOTAL													
Excellent	4	2		2									
Good	14	2	3	5	2	2							
Fair	11	1		1	4	1	2	2					
Poor	3					1	1		1				
No Rating													
Total	32	5	3	8	6	4	3	2	1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 68.8%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 50.0%

APPENDIX XIV

TRASH

K-2

52H

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Trash - K/2

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	2.00	1			1								
Urban - Out	3	2.03	1		2									
Suburb - In	2	2.53		1			1							
Suburb - Out	3	2.38		1	1		1							
Rural - In	2	2.25			2									
Rural - Out	5	1.82	2	2		1								
Total/Aver.	17	2.11	4	4	5	2	2							
NON-TEACHERS														
Adm - In	2	1.95		1	1									
Adm - Out	3	1.32	2	1										
C&I - In	2	2.28		1		1								
C&I - Out	3	1.66	1	1	1									
EE Experts	5	2.45	1	1	1	1		1						
Total/Aver.	15	1.98	4	5	3	2		1						
TOTAL/AVER. - ALL	32	2.05	8	9	8	4	2	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Trash - K/2

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	5	3	1	1									
Good	9	1	3	3	1	1							
Fair	1				1								
Poor	2			1		1							
No Rating													
Total	17	4	4	5	2	2							
NON-TEACHERS													
Excellent	6	4	2										
Good	7		3	3	1								
Fair	2				1		1						
Poor													
No Rating													
Total	15	4	5	3	2		1						
TOTAL													
Excellent	11	7	3	1									
Good	16	1	6	6	2	1							
Fair	3				2		1						
Poor	2			1		1							
No Rating													
Total	32	8	9	8	4	2	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 84.4%

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
E.Q. Index for School - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.73	1		1									
Urban - Out	4	1.57	2	1	1									
Suburb - In	2	1.00	2											
Suburb - Out	3	2.63		1	1			1						
Rural - In	1	1.40	1											
Rural - Out	3	1.53	1	2										
Total/Aver.	15	1.71	7	4	3			1						
NON-TEACHERS														
Adm - In	2	2.47		1			1							
Adm - Out	3	1.33	2	1										
C&I - In	2	2.54			1	1								
C&I - Out	2	1.35	1	1										
EE Experts	5	2.48		1	2	1	1							
Total/Aver.	14	2.08	3	4	3	2	2							
TOTAL/AVER. - ALL	29	1.89	10	8	6	2	2	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 89.7%

APPENDIX XV

AN ENVIRONMENTAL QUALITY INDEX FOR THE SCHOOL AND NEIGHBORHOOD

3-4

55A

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
E.Q. Index for School - 3/4

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	8	5	2	1									
Good	6	2	2	2									
Fair	1						1						
Poor													
No Rating													
Total	15	7	4	3			1						
NON-TEACHERS													
Excellent	6	3	3										
Good	5		1	2		2							
Fair	3			1	2								
Poor													
No Rating													
Total	14	3	4	3	2	2							
TOTAL													
Excellent	14	8	5	1									
Good	11	2	3	4		2							
Fair	4			1	2		1						
Poor													
No Rating													
Total	29	10	8	6	2	2	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 89.7

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 86.2

APPENDIX XVI

MAN'S ADAPTATION

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Man's Adaptation - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.29		1		1								
Urban - Out	4	2.89	1			1		2						
Suburb - In	2	1.03	2											
Suburb - Out	3	2.67			1	2								
Rural - In	1	2.55				1								
Rural - Out	3	1.30	3											
Total/Aver.	15	2.04	6	1	1	5		2						
NON-TEACHERS														
Adm - In	2	2.10	1			1								
Adm - Out	3	1.70	1	1	1									
C&I - In	2	2.84	1						1					
C&I - Out	2	2.32	1					1						
EE Experts	5	2.83		1		2	1	1						
Total/Aver.	14	2.41	4	2	1	3	1	2	1					
TOTAL/AVER. - ALL	29	2.22	10	3	2	8	1	4	1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 79.3%

Title and Grade Level
Man's Adaptation - 3/4

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	4	4											
Good	8	2	1	1	4								
Fair	3				1		2						
Poor													
No Rating													
Total	15	6	1	1	5		2						
NON-TEACHERS													
Excellent	3	3											
Good	5		2	1	2								
Fair	5	1			1	1	2						
Poor	1							1					
No Rating													
Total	14	4	2	1	3	1	2	1					
TOTAL													
Excellent	7	7											
Good	13	2	3	2	6								
Fair	8	1			2	1	4						
Poor	1							1					
No Rating													
Total	29	10	3	2	8	1	4	1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 79,3%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 69,0%

APPENDIX XVII

THE VACANT LOT

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Vacant Lot - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS Urban - In	3	2.30	1	1			1							
Urban - Out	4	2.89	1		1		1		1					
Suburb - In	2	1.00	2											
Suburb - Out	3	2.77		1		1	1							
Rural - In	1	1.60		1										
Rural - Out	3	1.59	1	2										
Total/Aver.	16	2.20	5	5	1	1	3		1					
NON-TEACHERS Adm - In	2	3.43					2							
Adm - Out	3	2.18	1			2								
C&I - In	2	2.74				2								
C&I - Out	2	1.78	1		1									
EE Experts	5	2.31	1	2	1	1								
Total/Aver.	14	2.31	3	2	2	5	2							
TOTAL/AVER. - ALL	30	2.25	8	7	3	6	5		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 80.0 %

APPENDIX XVIII

THE SCHOOL LAWN

3-4

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Vacant Lot - 3/4

BEST COPY AVAILABLE

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	2	2											
Good	9	3	4		1	1							
Fair	5		1	1		2		1					
Poor													
No Rating													
Total	16	5	5	1	1	3		1					
NON-TEACHERS													
Excellent	5	3	2										
Good	5			2	2	1							
Fair	4				3	1							
Poor													
No Rating													
Total	14	3	2	2	5	2							
TOTAL													
Excellent	7	5	2										
Good	14	3	4	2	3	2							
Fair	9		1	1	3	3		1					
Poor													
No Rating													
Total	30	8	7	3	6	5		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 80.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 70.0%

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

State and Grade Level

School Lawn - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	3	1.70	1	1	1									
Urban - Out	4	2.36		1	1	2								
Suburb - In	2	1.00	2											
Suburb - Out	3	2.68		1		1	1							
Rural - In	1	1.15	1											
Rural - Out	3	1.27	3											
Total/Aver.	16	1.85	7	3	2	3	1							
NON-TEACHERS														
Adm - In	2	2.31	1				1							
Adm - Out	3	1.37	2	1										
C&I - In	2	2.01		1	1									
C&I - Out	2	1.55	1		1									
EE Experts	5	2.23		2	2		1							
Total/Aver.	14	1.93	4	4	4		2							
TOTAL/AVER. - All	30	1.88	11	7	6	3	3							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.0%

Title and Grade Level
School - 3/4

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	7	4	2	1									
Good	7	3	1		3								
Fair	1					1							
Poor													
No Rating	1			1									
Total	16	7	3	2	3	1							
NON-TEACHERS													
Excellent	7	4	2	1									
Good	7		2	3		2							
Fair													
Poor													
No Rating													
Total	14	4	4	4		2							
TOTAL													
Excellent	14	8	4	2									
Good	14	3	3	3	3	2							
Fair	1					1							
Poor													
No Rating	1			1									
Total	30	11	7	6	3	3							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 96.6%

APPENDIX XIX

THE CEMETERY

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Cemetery - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	3	2.25		1	1	1								
Urban - Out	4			1	1			1		1				
Suburb - In	2	2.30	1					1						
Suburb - Out	3	2.47		2			1							
Rural - In	1	2.00		1										
Rural - Out	3	1.35	2	1										
Total/Aver.	16	2.37	3	6	2	1	1	2		1				
NON-TEACHERS														
Adm - In	2	2.52	1						1					
Adm - Out	3	1.47	2		1									
C&I - In	2	3.14			1			1						
C&I - Out	2	2.15		1	1									
EP Experts	5	2.24	1	1	1	1	1							
Total/Aver.	14	2.23	4	2	4	1	1	1	1					
TOTAL/AVER. - ALL	30	2.30	7	8	6	2	2	3	1	1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 76.7%

CORRELATION BETWEEN THE AVERAGE RESPONSES

AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR

BY THE JURY

Title and Grade Level

Cemetery - 3/4

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	3	1	2										
Good	9	2	4	2	1								
Fair	2					1			1				
Poor	1						1						
No Rating	1						1						
Total	16	3	6	2	1	1	2		1				
NON-TEACHERS													
Excellent	5	3	1	1									
Good	5	1	1	2	1								
Fair	2					1		1					
Poor	2			1			1						
No Rating													
Total	14	4	2	4	1	1	1	1					
TOTAL													
Excellent	8	4	3	1									
Good	14	3	5	4	2								
Fair	4					2		1	1				
Poor	3			1			2						
No Rating	1						1						
Total	30	7	8	6	2	2	3	1	1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 76.7%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 75.9%

APPENDIX XX

GIANTS ON THE LAND: TREES IN YOUR ENVIRONMENT

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level

Gianta on the Land - Trees - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	3	1.05	3											
Urban - Out	4	1.69	2	1		1								
Suburb - In	2	1.00	2											
Suburb - Out	3	2.20		1	1	1								
Rural - In	1	1.00	1											
Rural - Out	3	1.03	3											
Total/Aver.	16	1.41	11	2	1	2								
NON-TEACHERS														
Adm - In	2	1.42	1	1										
Adm - Out	3	1.05	3											
C&I - In	2	3.11					2							
C&I - Out	2	1.44	1	1										
EE Experts	5	2.12	1	2	1		1							
Total/Aver.	14	1.83	6	4	1		3							
TOTAL/AVER. - ALL	30	1.58	17	6	2	2	3							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.0%

Title and Grade Level
Giants on the Land - Trees - 3/4

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	10	10											
Good	4	1	1	1	1								
Fair	2		1		1								
Poor													
No Rating													
Total	16	11	2	1	2								
NON-TEACHERS													
Excellent	7	4	3										
Good	4	2	1	1									
Fair	3					3							
Poor													
No Rating													
Total	14	6	4	1		3							
TOTAL													
Excellent	17	14	3										
Good	8	3	2	2	1								
Fair	5		1		1	3							
Poor													
No Rating													
Total	30	17	6	2	2	3							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 83.3%

APPENDIX XXI

WATER

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Water - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	3	1.90		3										
Urban - Out	4	3.34			1		1	1	1					
Suburb - In	2	1.00	2											
Suburb - Out	3	2.50			2		1							
Rural - In	1	3.00				1								
Rural - Out	3	1.53	2		1									
Total/Aver.	16	2.26	4	3	4	1	2	1	1					
NON-TEACHERS														
Adm - In	2	1.41	2											
Adm - Out	3	1.76	1	1	1									
C&I - In	2	3.96				1					1			
C&I - Out	2	1.50	1	1										
EE Experts	5	2.96		1	1		2	1						
Total/Aver.	14	2.41	4	3	2	1	2	1			1			
TOTAL/AVER. - ALL	30	2.33	8	6	6	2	4	2	1		1			

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 73.3%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Water - 3/4

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	3	2	1										
Good	10	2	2	4	1	1							
Fair	2					1	1						
Poor	1							1					
No Rating													
Total	16	4	3	4	1	2	1	1					
NON-TEACHERS													
Excellent	5	4	1										
Good	3		2	1									
Fair	5			1	1	2	1						
Poor	1									1			
No Rating													
Total	14	4	3	2	1	2	1			1			
TOTAL													
Excellent	8	6	2										
Good	13	2	4	5	1	1							
Fair	7			1	1	3	2						
Poor	2							1		1			
No Rating													
Total	30	8	6	6	2	4	2	1		1			

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 73.3%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 70.0%

APPENDIX XXII

THE BREATH OF LIFE OR DEATH - AIR POLLUTION

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level

Breath of Life or Death:
Air Pollution - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.65	1	1										
Urban - Out	4	1.79	2		2									
Suburb - In	2	1.00	2											
Suburb - Out	3	2.48		1	1	1								
Rural - In	1	2.25			1									
Rural - Out	3	1.28	2	1										
Total/Aver.	15	1.73	7	3	4	1								
NON-TEACHERS														
Adm - In	2	1.45	1	1										
Adm - Out	3	1.23	2	1										
C&I - In	2	2.62			1	1								
C&I - Out	2	1.82	1			1								
EE Experts	5	1.99	1	2	2									
Total/Aver.	14	1.81	5	4	3	2								
TOTAL/AVER. - All	29	1.77	12	7	7	3								

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 100.0%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Breath of Life or Death:
Air Pollution - 3/4

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	8	6	1	1									
Good	6	1	2	3									
Fair	1				1								
Poor													
No Rating													
Total	15	7	3	4	1								
NON-TEACHERS													
Excellent	9	5	2	2									
Good	3		2	1									
Fair	2				2								
Poor													
No Rating													
Total	14	5	4	3	2								
TOTAL													
Excellent	17	11	3	3									
Good	9	1	4	4									
Fair	3				3								
Poor													
No Rating													
Total	29	12	7	7	3								

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 100.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 89.7%

APPENDIX XXIII

WILD IDEAS WITH WILD PLANTS

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level

Wild Idea With Wild Plants - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.5 to 7.0
TEACHERS														
Urban - In	3	1.68	1	1	1									
Urban - Out	4	2.91				3	1							
Suburb - In	2	1.00	2											
Suburb - Out	3	2.12	1		1	1								
Rural - In	1	1.10	1											
Rural - Out	3	1.15	3											
Total/Aver.	16	1.85	8	1	2	4	1							
NON-TEACHERS														
Adm - In	2	1.65	1	1										
Adm - Out	3	1.28	2	1										
C&I - In	2	3.18			1				1					
C&I - Out	2	1.83	1		1									
EE Experts	5	2.31	1	1	1	1	1							
Total/Aver.	14	2.05	5	3	3	1	1		1					
TOTAL/AVER. - ALL	30	1.94	13	4	5	5	2		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.0%

CORRELATION BETWEEN THE AVERAGE RESPONSES

AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR

BY THE JURY

Title and Grade Level

Wild Ideas With Wild Plants - 3/4

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	6	5		1									
Good	7	2	1	1	2	1							
Fair	2				2								
Poor													
No Rating	1	1											
Total	16	8	1	2	4	1							
NON-TEACHERS													
Excellent	5	4	1										
Good	6		2	3	1								
Fair	2	1				1							
Poor	1							1					
No Rating													
Total	14	5	3	3	1	1		1					
TOTAL													
Excellent	11	9	1	1									
Good	13	2	3	4	3	1							
Fair	4	1			2	1							
Poor	1							1					
No Rating	1	1											
Total	30	13	4	5	5	2		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 82.8%

APPENDIX XXIV

THE ENDANGERED PREDATOR AND HIS PREY

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title 1 G: Le
Predator/Prey - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	3	3.03		1				2						
Urban - Out	4	4.01				1			3					
Suburb - In	2	2.18	1				1							
Suburb - Out	3	2.45		1		2								
Rural - In	1	3.00				1								
Rural - Out	3	2.13		1	1	1								
Total/Aver.	16	2.89	1	3	1	5	1	2	3					
NON-TEACHERS														
Adm - In	2	2.58			1		1							
Adm - Out	3	2.28	1		1		1							
C&I - In	2	4.17						1		1				
C&I - Out	2	2.53			1	1								
EE Experts	5	2.64		2		1	1	1						
Total/Aver.	14	2.76	1	2	3	2	3	2		1				
TOTAL/AVER. - ALL	30	2.83	2	5	4	7	4	4	3	1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 60.0%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Predator/Prey - 3/4

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent													
Good	7	1	3		2	1							
Fair	7			1	3		2	1					
Poor	2							2					
No Rating													
Total	16	1	3	1	5	1	2	3					
NON-TEACHERS													
Excellent	1	1											
Good	3		1	1		1							
Fair	7		1	2	2	1	1						
Poor	2						1		1				
No Rating	1					1							
Total	14	1	2	3	2	3	2		1				
TOTAL													
Excellent	1	1											
Good	10	1	4	1	2	2							
Fair	14		1	3	5	1	3	1					
Poor	4						1	2	1				
No Rating	1					1							
Total	30	2	5	4	7	4	4	3	1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 60.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 37.9%

APPENDIX XXV

POETRY IN THE ENVIRONMENT

3-4

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Poetry In The Environment - 3/4

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	3	1.67	1	1	1									
Urban - Out	4	2.59		1	1	1	1							
Suburb - In	2	1.00	2											
Suburb - Out	3	2.25	1		1		1							
Rural - In	1	1.10	1											
Rural - Out	3	1.33	2	1										
Total/Aver.	16	1.83	7	3	3	1	2							
NON-TEACHERS														
Adm - In	2	1.39	1	1										
Adm - Out	3	1.17	3											
C&I - In	2	3.06				1	1							
C&I - Out	2	2.13			2									
EE Experts	5	2.35	1		2	1	1							
Total/Aver.	14	2.03	5	1	4	2	2							
TOTAL/AVER. - ALL	30	1.92	12	4	7	3	4							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 86.7%

APPENDIX XXVI

PROBLEM SOLVING

5-6

CORRELATION BETWEEN THE AVERAGE RESPONSES

AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR

BY THE JURY

Title and Grade Level
Poetry in the Environment - 3/4

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	9	6	2	1									
Good	5	1	1	2		1							
Fair	2				1	1							
Poor													
No Rating													
Total	16	7	3	3	1	2							
NON-TEACHERS													
Excellent	6	5	1										
Good	6			3	2	1							
Fair	1					1							
Poor	1			1									
No Rating													
Total	14	5	1	4	2	2							
TOTAL													
Excellent	15	11	3	1									
Good	11	1	1	5	2	2							
Fair	3				1	2							
Poor	1			1									
No Rating													
Total	30	12	4	7	3	4							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 86.7%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 86.7%

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

[illegible]le [illegible] Gr[illegible] Lev[illegible]
Problem Solving - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.13	2											
Urban - Out	4	2.40	1	1			2							
Suburb - In	4	2.88		1	1	1				1				
Suburb - Out	3	2.19		1	1	1								
Rural - In	2	2.45			1	1								
Rural - Out	3	2.62			1	1	1							
Total/Aver.	18	2.10	3	3	4	4	3			1				
NON-TEACHERS														
Adm - In	2	1.46	2											
Adm - Out	3	2.85	1		1						1			
C&I - In	2	3.05					2							
C&I - Out	2	1.79	1			1								
EE Experts	5	2.35	1	2		1			1					
Total/Aver.	14	2.42	5	2	1	2	2		1		1			
TOTAL/AVER. - ALL	32	2.24	8	5	5	6	5		1	1	1			

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 75.0%

CORRELATION BETWEEN THE AVERAGE RESPONSES

AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR

BY THE JURY

Title [illegible]

Problem Solving - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	5	2	1		2								
Good	8	1	2	4	1								
Fair	4				1	3							
Poor	1								1				
No Rating													
Total	18	3	3	4	4	3			1				
NON-TEACHERS													
Excellent	4	3	1										
Good	7	2	1	1	2	1							
Fair	2					1		1					
Poor	1									1			
No Rating													
Total	14	5	2	1	2	2		1		1			
TOTAL													
Excellent	9	5	2		2								
Good	15	3	3	5	3	1							
Fair	6				1	4		1					
Poor	2								1	1			
No Rating													
Total	32	8	5	5	6	5		1	1	1			

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 75.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 75.0%

APPENDIX XXVII

SUCCESSION AND THE POND COMMUNITY

5-6

78A

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Pond Succession - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS Urban - In	2	1.23	2											
Urban - Out	4	2.86	1	1				1		1				
Suburb - In	4	3.13		1	1			1		1				
Suburb - Out	3	2.41		1	1	1								
Rural - In	2	2.95				1	1							
Rural - Out	3	1.92	1	1	1									
Total/Aver.	18	2.51	4	4	3	2	1	2		2				
NON-TEACHERS Adm - In	2	2.92				1	1							
Adm - Out	3	1.62	2		1									
C&I - In	2	3.57					1	1						
C&I - Out	2	2.18	1				1							
EE Experts	5	2.69			2	2		1						
Total/Aver.	14	2.54	3		3	3	3	2						
TOTAL/AVER. - ALL	32	2.53	7	4	6	5	4	4		2				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 75.0%

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Pond Succession - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	6	2	3	1									
Good	7	2	1	2	1	1							
Fair	5				1		2		2				
Poor													
No Rating													
Total	18	4	4	3	2	1	2		2				
NON-TEACHERS													
Excellent	4	3		1									
Good	2				1	1							
Fair	5			2	1	1	1						
Poor	2					1	1						
No Rating	1				1								
Total	14	3		3	3	3	2						
TOTAL													
Excellent	10	5	3	2									
Good	9	2	1	2	2	2							
Fair	10			2	2	1	3		2				
Poor	2					1	1						
No Rating	1				1								
Total	32	7	4	6	5	4	4		2				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 75.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 61.3%

APPENDIX XXVIII

FIELD AND FOREST SUCCESSION

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Field & Forest Succession - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS Urban - In	2	1.25	2											
Urban - Out	4	2.44	1	1			2							
Suburb - In	4	3.01			1	1	1	1						
Suburb - Out	3	2.73		1		1	1							
Rural - In	2	1.85	1		1									
Rural - Out	3	2.06		1	2									
Total/Aver.	18	2.36	4	3	4	2	4	1						
NON-TEACHERS Adm - In	2	1.82		1	1									
Adm - Out	3	1.68	1	1	1									
C&I - In	2	2.30		1		1								
C&I - Out	2	1.90	1			1								
EE Experts	5	2.64		2	1			2						
Total/Aver.	14	2.16	2	5	3	2		2						
TOTAL/AVER. - ALL	32	2.27	6	8	7	4	4	3						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 78.1%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Field and Forest Succession - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	2	1	1										
Good	9	3	2	2	1	1							
Fair	5			1		3	1						
Poor													
No Rating	2			1	1								
Total	18	4	3	4	2	4	1						
NON-TEACHERS													
Excellent	4	2	2										
Good	7		3	2	2								
Fair	3			1			2						
Poor													
No Rating													
Total	14	2	5	3	2		2						
TOTAL													
Excellent	6	3	3										
Good	16	3	5	4	3	1							
Fair	8			2		3	3						
Poor													
No Rating	2			1	1								
Total	32	6	8	7	4	4	3						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 78.1%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 73.3%

APPENDIX XXIX

WEATHER AND CLIMATE

5-6

82B

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Weather and Climate - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.10	2											
Urban - Out	4	1.95		2	2									
Suburb - In	4	2.14		2	1	1								
Suburb - Out	3	1.62	1	2										
Rural - In	2	1.03	2											
Rural - Out	3	1.18	3											
Total/Aver.	18	1.61	8	6	3	1								
NON-TEACHERS														
Adm - In	2	1.47	1	1										
Adm - Out	3	1.14	3											
C&I - In	2	2.48			1	1								
C&I - Out	2	1.43	2											
EE Experts	5	2.45	1		3			1						
Total/Aver.	14	1.89	7	1	4	1		1						
TOTAL/AVER. - ALL	32	1.73	15	7	7	2		1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 96.9%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Weather and Climate - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	10	6	3	1									
Good	8	2	3	2	1								
Fair													
Poor													
No Rating													
Total	18	8	6	3	1								
NON-TEACHERS													
Excellent	5	5											
Good	5	1	1	3									
Fair	4	1		1	1		1						
Poor													
No Rating													
Total	14	7	1	4	1		1						
TOTAL													
Excellent	15	11	3	1									
Good	13	3	4	5	1								
Fair	4	1		1	1		1						
Poor													
No Rating													
Total	32	15	7	7	2		1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 96.9%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 87.5%

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APPENDIX XXX

MINERALS

5-6

84A

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Minerals - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.03	2											
Urban - Out	4	2.83	1			1	1	1						
Suburb - In	4	2.79	1			1		2						
Suburb - Out	3	2.00	1		2									
Rural - In	2	1.98		1	1									
Rural - Out	3	1.80	1	1	1									
Total/Aver.	18	2.21	6	2	4	2	1	3						
NON-TEACHERS														
Adm - In	2	1.23	2											
Adm - Out	3	2.68	1				2							
C&I - In	2	2.96				1	1							
C&I - Out	2	1.98	1			1								
EE Experts	5	2.67			3	1		1						
Total/Aver.	14	2.41	4		3	3	3	1						
TOTAL/AVER. - ALL	32	2.30	10	2	7	5	4	4						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 75.0%

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Minerals - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	6	4	2										
Good	9	2		4	2		1						
Fair	2					1	1						
Poor	1						1						
No Rating													
Total	18	6	2	4	2	1	3						
NON-TEACHERS													
Excellent	4	3		1									
Good	3	1		1		1							
Fair	7			1	3	2	1						
Poor													
No Rating													
Total	14	4		3	3	3	1						
TOTAL													
Excellent 1	10	7	2	1									
Good	12	3		5	2	1	1						
Fair	9			1	3	3	2						
Poor	1						1						
No Rating													
Total	32	10	2	7	5	4	4						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 75.0%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 68.8%

APPENDIX XXXI

ANIMALS AND THEIR HABITAT

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Animal Habitat - 5/6

	Number of Respondents	Average Response	1.00 to 1 50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.00	2											
Urban - Out	4	2.06	2		1		1							
Suburb - In	4	1.76	2		2									
Suburb - Out	3	1.93	1	1		1								
Rural - In	2	1.00	2											
Rural - Out	3	1.65	1	2										
Total/Aver.	18	1.67	10	3	3	1	1							
NON-TEACHERS														
Adm - In	2	1.39	1	1										
Adm - Out	3	1.43	2	1										
C&I - In	2	2.40			2									
C&I - Out	2	1.13	2											
EE Experts	5	2.28	1	1	2			1						
Total/Aver.	14	1.82	6	3	4			1						
TOTAL/AVER. - ALL	32	1.74	16	6	7	1	1	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93.8%

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Animal Habitat - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	12	10	2										
Good	5		1	3	1								
Fair	1					1							
Poor													
No Rating													
Total	18	10	3	3	1	1							
NON-TEACHERS													
Excellent	10	6	3	1									
Good	3			3									
Fair	1						1						
Poor													
No Rating													
Total	14	6	3	4			1						
TOTAL													
Excellent	22	16	5	1									
Good	8		1	6	1								
Fair	2					1	1						
Poor													
No Rating													
Total	32	16	6	7	1	1	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93.8%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 93.8%

APPENDIX XXXII

SOIL AND EROSION

5-6

88 A

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Soil and Erosion - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.08	2											
Urban - Out	4	2.40	1	1		1		1						
Suburb - In	4	1.84	1	2	1									
Suburb - Out	3	2.82				2	1							
Rural - In	2	1.82		2										
Rural - Out	3	2.50		1	1		1							
Total/Aver.	18	2.15	4	6	2	3	2	1						
NON-TEACHERS														
Adm - In	2	1.49	2											
Adm - Out	2	1.53	1	1										
C&I - In	2	2.22		1	1									
C&I - Out	2	1.79	1		1									
EE Experts	5	2.07	2	1	1			1						
Total/Aver.	13	1.88	6	3	3			1						
TOTAL/AVER. - ALL	31	2.04	10	9	5	3	2	2						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 87.1%

Title and Grade Level
Soil and Erosion - 5/6

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	6	3	3										
Good	8	1	2	2	3								
Fair	2					1	1						
Poor	1					1							
No Rating	1		1										
Total	18	4	6	2	3	2	1						
NON-TEACHERS													
Excellent	6	5	1										
Good	6	1	2	3									
Fair	1						1						
Poor													
No Rating													
Total	13	6	3	3			1						
TOTAL													
Excellent	12	8	4										
Good	14	2	4	5	3								
Fair	3					1	2						
Poor	1					1							
No Rating	1		1										
Total	31	10	9	5	3	2	2						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 87.1%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 86.7%

APPENDIX XXXIII

OUR NATIVE LANDS: CONSERVE AND PRESERVE

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Native Lands - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.08	2											
Urban - Out	4	2.89		1			3							
Suburb - In	4	2.05	1	1	1		1							
Suburb - Out	3	1.62	1	1	1									
Rural - In	2	1.88		1	1									
Rural - Out	3	2.55		1	1	1								
Total/Aver.	18	2.07	4	5	4	1	4							
NON-TEACHERS														
Adm - In	2	1.67	1	1										
Adm - Out	3	1.34	2	1										
C&I - In	2	2.56			1	1								
C&I - Out	2	1.30	2											
EE Experts	5	2.12	2		2			1						
Total/Aver.	14	1.83	7	2	3	1		1						
TOTAL/AVER. - ALL	32	1.97	11	7	7	2	4	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 84.4%

CORRELATION BETWEEN THE AVERAGE RESPONSES AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Native Lands - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	6	4	1	1									
Good	6		3	3									
Fair	6		1		1	4							
Poor													
No Rating													
Total	18	4	5	4	1	4							
NON-TEACHERS													
Excellent	5	5											
Good	8	2	2	3	1								
Fair	1						1						
Poor													
No Rating													
Total	14	7	2	3	1		1						
TOTAL													
Excellent	11	9	1	1									
Good	14	2	5	6	1								
Fair	7		1		1	4	1						
Poor													
No Rating													
Total	32	11	7	7	2	4	1						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 84.4%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 78.1%

APPENDIX XXXIV

SCARS UPON THE LAND

5-6

92A

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Scars - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.0
TEACHERS														
Urban - In	2	1.37	2											
Urban - Out	4	2.91	1			1		2						
Suburb - In	4	3.14			1	1		2						
Suburb - Out	3	2.28	1			2								
Rural - In	2	2.08		1	1									
Rural - Out	3	2.62			2			1						
Total/Aver.	18	2.54	4	1	4	4		5						
NON-TEACHERS														
Adm - In	2	2.26		1		1								
Adm - Out	3	1.68	1	2										
C&I - In	2	2.27			2									
C&I - Out	2	2.10	1			1								
EE Experts	5	2.90			2	2			1					
Total/Aver.	14	2.34	2	3	4	4			1					
TOTAL/AVER. - ALL	32	2.46	6	4	8	8		5	1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 81.3%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Scars - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	2	1	1										
Good	9	3		3	2		1						
Fair	6			1	2		3						
Poor	1						1						
No Rating													
Total	18	4	1	4	4		5						
NON-TEACHERS													
Excellent	2	1	1										
Good	11	1	2	4	4								
Fair	1							1					
Poor													
No Rating													
Total	14	2	3	4	4			1					
TOTAL													
Excellent	4	2	2										
Good	20	4	2	7	6		1						
Fair	7			1	2		3	1					
Poor	1						1						
No Rating													
Total	32	6	4	8	8		5	1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 81.3%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 75.0%

APPENDIX XXXV

WATER: LIFE-BLOOD OF THE EARTH

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Water - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.58	1	1										
Urban - Out	4	2.08	1	2			1							
Suburb - In	4	2.45	1	1	1			1						
Suburb - Out	3	1.80	1	1		1								
Rural - In	2	1.40	2											
Rural - Out	3	2.30		1	1	1								
Total/Aver.	18	2.02	6	6	2	2	1	1						
NON-TEACHERS														
Adm - In	2	2.14		1	1									
Adm - Out	3	1.22	3											
C&I - In	2	1.71		2										
C&I - Out	2	1.13	2											
EE Experts	5	2.31	1	1	2			1						
Total/Aver.	14	1.80	6	4	3			1						
TOTAL/AVER. - ALL	32	1.92	12	10	5	2	1	2						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

CORRELATION BETWEEN THE AVERAGE RESPONSES

AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR

BY THE JURY

Title and Grade Level

Water - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	6	4	2										
Good	8	2	4		2								
Fair	4			2		1	1						
Poor													
No Rating													
Total	18	6	6	2	2	1	1						
NON-TEACHERS													
Excellent	7	5	2										
Good	6	1	2	3									
Fair	1						1						
Poor													
No Rating													
Total	14	6	4	3			1						
TOTAL													
Excellent	13	9	4										
Good	14	3	6	3	2								
Fair	5			2		1	2						
Poor													
No Rating													
Total	32	12	10	5	2	1	2						

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 84.4%

APPENDIX XXXVI

AIR POLLUTION (PART I)

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Middle Grade Level
Air Pollution - Part 1 - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.00	2											
Urban - Out	4	1.43	2	2										
Suburb - In	4	2.36	2			1			1					
Suburb - Out	3	2.39		1	1		1							
Rural - In	2	1.50	1	1										
Rural - Out	3	2.15		1	1	1								
Total/Aver.	18	1.88	7	5	2	2	1		1					
NON-TEACHERS														
Adm - In	2	1.48	1	1										
Adm - Out	3	1.62	2			1								
C&I - In	2	1.98	1		1									
C&I - Out	2	1.13	2											
EE Experts	5	2.18	1	1	1	1	1							
Total/Aver.	14	1.78	7	2	2	2	1							
TOTAL/AVER. - ALL	32	1.83	14	7	4	4	2		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

Title and Grade Level
Air Pollution - Part I - 5/6

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	10	7	3										
Good	6		2	2	1	1							
Fair	2				1			1					
Poor													
No Rating													
Total	18	7	5	2	2	1		1					
NON-TEACHERS													
Excellent	8	7	1										
Good	5		1	2	1	1							
Fair	1				1								
Poor													
No Rating													
Total	14	7	2	2	2	1							
TOTAL													
Excellent	18	14	4										
Good	11		3	4	2	2							
Fair	3				2			1					
Poor													
No Rating													
Total	32	14	7	4	4	2		1					

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 90.6%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 90.6%

APPENDIX XXXVII

AIR POLLUTION (PART II)

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Air Pollution - Part II - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.00	2											
Urban - Out	4	1.95	1	1	1		1							
Suburb - In	4	2.81		1	1	1				1				
Suburb - Out	3	2.51			1	2								
Rural - In	2	2.11	1				1							
Rural - Out	3	2.43			1	2								
Total/Aver.	18	2.23	4	2	4	5	2			1				
NON-TEACHERS														
Adm - In	2	1.78	1		1									
Adm - Out	3	1.88	2				1							
C&I - In	2	2.78			1		1							
C&I - Out	2	1.20	2											
EE Experts	5	2.01	1	2	1		1							
Total/Aver.	14	1.94	6	2	3		3							
TOTAL/AVER. - ALL	32	2.10	10	4	7	5	5			1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 81.3%

Title and Grade Level
Air Pollution - Part II - 5/6

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	5	4	1										
Good	10		1	4	5								
Fair	2					2							
Poor	1								1				
No Rating													
Total	18	4	2	4	5	2			1				
NON-TEACHERS													
Excellent	6	5		1									
Good	5	1	2	1		1							
Fair	2			1		1							
Poor	1					1							
No Rating													
Total	14	6	2	3		3							
TOTAL													
Excellent	11	9	1	1									
Good	15	1	3	5	5	1							
Fair	4			1		3							
Poor	2					1			1				
No Rating													
Total	32	10	4	7	5	5			1				

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 81.3%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 81.3%

APPENDIX XXXVIII

NOISE POLLUTION

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Noise Pollution - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1.00	2											
Urban - Out	4	2.09	1		3									
Suburb - In	4	2.80		1		1	2							
Suburb - Out	3	1.75	1	1	1									
Rural - In	2	1.45	1	1										
Rural - Out	3	1.57	1	2										
Total/Aver.	18	1.91	6	5	4	1	2							
NON-TEACHERS														
Adm - In	2	1.33	2											
Adm - Out	3	1.32	3											
C&I - In	2	2.48		1		1								
C&I - Out	2	1.20	2											
EE Experts	5	1.89	2	1	1	1								
Total/Aver.	14	1.67	9	2	1	2								
TOTAL/AVER. - ALL	32	1.81	15	7	5	3	2							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93.8%

CORRELATION BETWEEN THE AVERAGE RESPONSES
AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR
BY THE JURY

Title and Grade Level
Noise Pollution - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	7	4	1	2									
Good	7	2	3	2									
Fair	3				1	2							
Poor													
No Rating	1		1										
Total	18	6	5	4	1	2							
NON-TEACHERS													
Excellent	8	6	1	1									
Good	4	2	1		1								
Fair	1				1								
Poor													
No Rating	1	1											
Total	14	9	2	1	2								
TOTAL													
Excellent	15	10	2	3									
Good	11	4	4	2	1								
Fair	4				2	2							
Poor													
No Rating	2	1	1										
Total	32	15	7	5	3	2							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 93.8%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 86.7%

APPENDIX XXXIX

HOW TO PLAN A CLEAN-UP CAMPAIGN IN THE LOCAL COMMUNITY

5-6

AVERAGE RESPONSES AND DISTRIBUTION OF RESPONSES FOR THE JURY

Title and Grade Level
Clean-up Campaign - 5/6

	Number of Respondents	Average Response	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS														
Urban - In	2	1,08	2											
Urban - Out	4	2,41	1			3								
Suburb - In	4	1,83	1	1	2									
Suburb - Out	3	1,91	1	1		1								
Rural - In	2	1,98		1	1									
Rural - Out	3	2,60		1		1	1							
Total/Aver.	18	2,03	5	4	3	5	1							
NON-TEACHERS														
Adm - In	2	1,61	1	1										
Adm - Out	3	1,72	1	1	1									
C&I - In	2	1,99		1	1									
C&I - Out	2	1,21	2											
EE Experts	5	2.09	2	1	1	1								
Total/Aver.	14	1.80	6	4	3	1								
TOTAL/AVER. - ALL	32	1.93	11	8	6	6	1							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 96.9%

CORRELATION BETWEEN THE AVERAGE RESPONSE AND THE QUALITY EVALUATION OF EXCELLENT, GOOD, FAIR, OR POOR BY THE JURY

Title and Grade Level
Clean-up Campaign - 5/6

	Number of Respondents	1.00 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	3.01 to 3.50	3.51 to 4.00	4.01 to 4.50	4.51 to 5.00	5.01 to 5.50	5.51 to 6.00	6.01 to 6.50	6.51 to 7.00
TEACHERS													
Excellent	7	4	3										
Good	9	1	1	3	4								
Fair	2				1	1							
Poor													
No Rating													
Total	18	5	4	3	5	1							
NON-TEACHERS													
Excellent	6	4	1	1									
Good	7		5	1	1								
Fair	1			1									
Poor													
No Rating													
Total	14	4	6	3	1								
TOTAL													
Excellent	13	8	4	1									
Good	16	1	6	4	5								
Fair	3			1	1	1							
Poor													
No Rating													
Total	32	9	10	6	6	1							

PERCENTAGE OF RESPONSES BETWEEN 1.00 and 3.00 - 96.9%

PERCENTAGE OF RESPONSES EITHER EXCELLENT OR GOOD - 90.6%

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APPENDIX XL

LETTERS FROM REVIEWERS

May 9, 1974

Mr. Wint,

In general, these units are very complete, in my estimation. I have used much of the material in my classroom and it does "work". The evaluation has increased my understanding and interest because the teacher material is so complete and comprehensible. I have learned a great deal and have had the opportunity to involve young people in the process.

Thank you for this opportunity.

Sincerely,

Bonnie Maglich

The material in all the units was excellent. Science is my weakest area. Oftentimes if time is short, science is left out. These units are so well prepared that I plan to use them for my science next year. There are so many interesting activities that for the first time I shall enjoy teaching science.

Thank you so much

Carol
Wilt

Mrs. Don L. Rhodes
121 Claridon Road
Chardon, Ohio 44024

a very excellent environmental curriculum! It certainly does show the relationships and importance between - not only "man" - but the young boy & girl, and his environment.

I was very impressed with the interrelationships & interactions with this curriculum & all other school disciplines.

I hope I have the opportunity of teaching this!

Sincerely
Marie Rhodes

Dear Mr. Wint,

Thank you for asking us to participate in this project.

I can assure you both the children and I had fun doing it and learning many new things!

Sincerely

Rose Kundmuller

120 Moffett Drive
Chardon, Ohio
44024

May 28, 1974

RECEIVED

MAY 30 1974

Project C. D. E. C.

Mr. Dennis M. Wint, Director
Center for Development of Environmental
Curriculum
4284 Center Street
Willoughby, Ohio 44094

Dear Sir;

Enclosed with this letter are the questionnaires which I completed after carefully reviewing the Environmental Learning Experiences, units 1-9, for kindergarten through second grade, prepared by the Center for Development of Environmental Curriculum.

I was very favorably impressed with the units. They are characterized by simplicity and imaginativeness; they are well written and devoid in careless errors.

It is my opinion that the Environmental Learning Experiences could be used as the "sole" science program for K-1 in schools where a science text is not used. The units could also be used to supplement or enrich a regular science program.

Other positive characteristics of the Environmental Learning Experiences are:

1. The organization is flexible.
2. It can be easily correlated with other subject areas in the curriculum.
3. Most activities are highly motivating.
4. A lot of materials are not needed to accomplish the objectives, therefore, collection and storage of materials is no problem.
5. Most of the suggested references, or comparable materials, for all units except "Trash" are easily accessible in our elementary school library or the public library.

6. There are lots of opportunities to get students started on hobbies, i.e. collecting things.
7. The units are excellent for rural areas. Activities would foster greater awareness of nature and appreciation of interdependence in nature.
8. Especially noteworthy is the fact that the booklet was printed on 100% recycled paper. The authors teach by example!

I do not like the plastic fasteners with which the pages are held together. The pages do not turn easily or stay flat.

I thoroughly enjoyed participating in the evaluation of *Environmental Learning Experiences*.

Sincerely,

(Mrs.) Millicent McClelland

(Mrs.) Millicent McClelland

RECEIVED

MAY 16 1974

Project C. D. E. C.

May 14, 1974

I'm sorry if these are a bit late. A sojourn in the hospital delayed them a bit.

The work done on these units has been valuable. I now know what materials are in each of the units and I know I will use parts of them in my teaching. I will also encourage other fifth grade teachers in my building to use them.

I have enjoyed working on this pilot program. The people I have met, experiences shared, knowledge gained and shared all have made it a memorable experience.

Sincerely,
Rosalie Gifford

RECEIVED

MAY 30 1974

Project C. D. E. C.

May 28, 1974

Center For The Development of Environment Curriculum
Dennis Wint, Director
4284 Center Street
Willoughby, Ohio

Dear Mr. Wint:

I am enclosing the unit questionnaires I received from you. I want to express my appreciation for being able to evaluate and keep the units of study. I feel they are all exceptional units of work and will fit into my curriculum here in Geneva. Many of my fellow teachers are very interested in using them.

Thank you very much.

Yours truly,

Dixie L. Hamilton

Dixie L. Hamilton
Spencer Elementary
4641 N. Ridge-East
Geneva, Ohio 44041

RECEIVED
MAY 13 1974
Project C. D. E. C.

THE OHIO STATE UNIVERSITY

May 10, 1974

Mr. Dennis Wint, Director
Center for Development of Environmental Curriculum
Willoughby, Ohio

Dear Dennis:

As best I remember it, this completes all of my obligations with CDEC: if there is anything I still owe you, I certainly can't think of what it is.

I still haven't checked with Bob Roth concerning the information you asked about; if he appears before this goes in the mail today, I'll take care of it toot sweet. If not, it shall be done soon.

I have particularly enjoyed working with you and your group; it strikes me that you have done a good job. I have the remainder of it proceeds smoothly, and that you meet your deadlines better than I have met mine.

Keep in touch; let me, or us, know how we can work together again, if the occasion arises.

Sincerely,

John F. Disinger

ERIC Information Analysis Center for Science, Mathematics, and Environmental Education / 400 Lincoln Tower / Columbus, Ohio 43210 Phone (614) 422-6717

THE UNIVERSITY OF MICHIGAN

SCHOOL OF NATURAL RESOURCES

Samuel Trask Dana Bldg.
430 East University St.
Ann Arbor, Michigan 48104

RECEIVED
MAY 13 1974
Project C. D. E. C.

May 7, 1974

Mr. Dennis Wint
Center for the Development of
Environmental Curriculum
4284 Center Street
Willoughby, Ohio 44094

Dear Dennis:

I was pleased to have had the opportunity to read your environmental units. I spent a considerable amount of time reading the material very thoroughly and commenting on the enclosed sheets.

I think there are some excellent activities but in an overall sense I was very disappointed that the material was not oriented more effectively for the urbanite. The material is quite agrarian in orientation and needs to be revised to meet the needs of this populace. I think that it is vitally important that you read through each booklet and orient the text material and activities more toward the suburbanite and urbanite. I was most disappointed in the six units for 5th and 6th graders packaged in the green booklet.

I appreciate the time and effort you have put into the development of the materials and I hope that my comments on each of the evaluation sheets will be helpful to you.

Sincerely,

William B. Stapp

William B. Stapp
Program Chairman
Environmental Education &
Outdoor Recreation

Institute of Environmental Sciences

~~109 McGuffey Hall~~ • Phone: 513-529-~~6231~~
Taylor Road 2732
Miami University • Oxford, Ohio 45056

May 16, 1974

RECEIVED
MAY 22 1974
Project C. D. E. C.

Mr. Dennis M. Wint, Director
Center for the Development
of Environmental Curriculum
4284 Center Street
Willoughby, Ohio 44094

Dear Dennis:

Enclosed are the completed questionnaires for the elementary environmental units assigned to me for review and criticism. Two sets of questionnaires are being returned for reasons to be explained later.

First of all, in order to avoid any possibility of confusion or of dilution of our interest and enthusiasm for the units, let me commend you and your colleagues at the Center for the Development of Environmental Curriculum for a complex job extremely well done. The units reflect much reading, study, and adaptation on the part of the staff of your Center; the great breadth of material and the accuracy could have been achieved only by dedication of an unusually high order. The units--and the material in them--were sorely needed, and with them environmental education in the elementary grades is well on its way!

One complaint that I have had in my review of the units over the past two years is that I would have liked to spend ten times as much effort on the review, to provide detailed comments worthy of the efforts of your Center. On this particular review I solicited the help of my Administrative Assistant and a graduate of our program, Mr. David E. Todt, a number of our advanced IES students, and a few of our undergraduates who have chosen environmental education as a specialty area. In order to stress the subjectivity of the evaluation process, of which you are well aware, I am returning two sets of questionnaires, one set by different students and one by me. The latter is our official submission, and I was splendidly assisted by Dave Todt in arriving at my judgments on each item of each unit.

The following are a few broad, general comments on the units:

1. The units at all levels provide heavy doses of materials for the teachers who are not necessarily trained in environmental matters and who must integrate the materials into already heavy schedules. I would hope that the teachers would choose some of the areas and keep pounding at them rather than try to cover all of the material of a given grade level.

2. The inclusion of a reading list for students is a splendid addition. This was a point I made in a previous assessment.

3. The accuracy of material is exceptionally high at all levels, but vocabulary and content seem complex for all levels.

4. I would like to see more attention given to *alternative solutions*. For example, in the *Environmental Learning Experiences*, *Grades 5-6*, on page 4 mention is made of alternative solutions, but the report outline contains no mention of alternative solutions. This must be stressed since, throughout our education process, we operate around unique solutions to problems--certainly not a condition in real life.

My own area of specialization is air quality and pollution. As a result, I devoted more than average attention to the two Grades 5-6 units on air pollution. The material included in these units is of the usual high quality, but I have the following criticisms to make:

1. My foremost observation is that the material places too much emphasis on new forms of non-polluting or lower-polluting energy which are still in *experimental stages*. I am sure that many teachers will get the impression that solar houses, electric cars, energy from the tides, etc., are ready for mass use. All are in experimental stages. More attention should be given to present control methods, and the idea that non-polluting or lower-polluting sources of energy are possible and billions of dollars are being spent on perfecting them; some may not be feasible on economic, ecological, or technological grounds.

2. My next observation is that not enough attention is given in the units to the chief polluter, Mr. John Q. Citizen. Nowhere is it mentioned that the U. S. 6 per cent of the world's population uses about 35 per cent of the world's energy. It is imperative that John Q. change his life styles, and this *must* be stressed to a far greater degree than indicated in the material.

3. I am personally disappointed that the world-wide nature of air pollution is not mentioned. The teachers *must* know of the attitudes of the developing nations and the work and aspirations of the United Nations as exemplified in the United Nations Environment Programme.

4. Air pollution is not something new. The material should emphasize the recent increase in concern, something about governmental action and legislation, and environmental impact statements as a realistic means of combating pollution of all types.

I could go on and on, Dennis. I hope that these comments and our assessments are of value to the splendid efforts of the Center for the Development of Environmental Curriculum. Please let me know if we can be of further assistance.

Cordially yours,

C. E. Barthel, Jr., Director
Institute of Environmental Sciences

CEB/rem
encs.

NORTHERN ILLINOIS UNIVERSITY
The Lorado Taft Field Campus
OREGON, ILLINOIS 61061
Department of
OUTDOOR TEACHER EDUCATION
Area Code 815
Telephone 732-2111
732-2112

May 9, 1974

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MAY 20 1974
Project C. D. E. C.

Dennis M. Wint
Center for the Development of Env. Curriculum
4284 Center St.
Willoughby , Ohio

Dear Sirs:

Just finished review of your elementary materials. I consider them to be great. -- you ought to be proud of the step you have taken.

To what extent is Ohio Dept of Educ going to make these availableato to teachers in Ohio -- and elsewhere? How many copies will they print? - will they be for general sale ? etc. at what price?

I suppose I ought to make some negative comment - so as to feel that I am earning my fee -----

I suspect the one thing lacking throughout -- or the one thing that should be a thread throughout -- is that of "problem solving." I think you would have had a better program had you taken that material in the "problem solving" unit (5-6 grade level) and used it throughout each unit. As it is, so many teachers are apt to do a "problem solving" unit - and then omit this approach while doing the other units.

At any rate - well done. I appreciate the opportunity to get a look at these materials.

Sincerely,

Malcolm

Malcolm Swan

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RECREATION DEPARTMENT
JUN 3 1974
Project C. D. E. C.

Slippery Rock State College

May 28, 1974

Mr. Dennis Wint, Director
Center for the Development of
Environmental Curriculum
4284 Center Street
Willoughby, Ohio 44094

Dear Mr. Wint:

It was my great pleasure to examine the new Environmental Learning Experiences (K-6) developed by your office. I wanted to be sure and take this opportunity to tell you how much my class of in-service educators and myself were impressed by the teaching suggestions contained therein. There were a number of original approaches to existing environmental studies. Our congratulations on a job well done to you and your staff.

Sincerely,

Craig C. Chase

Craig C. Chase, Ph.D.
Environmental Education

CCC:sc

Slippery Rock, Pennsylvania 16057

BALL STATE UNIVERSITY MUNCIE, INDIANA 47306

2 June 1974

Mr. Dennis Wint, Director
Center for the Development of Environmental
Curriculum
4284 Center Street
Willoughby, Ohio 44094

Dear Mr. Wint:

Accompanying this letter are the completed evaluation forms for nine units designed for kindergarten through grade two, eleven units for grades three and four, and fourteen units for grades five and six.

I regard the reading of these units as not only an informative but also an enjoyable activity, Mr. Wint. The curriculum you and your staff have designed provides novel and challenging learning experiences for students in the elementary school. You are to be congratulated on your real contributions to environmental education.

Sincerely youre,

Rosanne Marek

Rosanne Marek, Ph.D.
Assistant Professor of History
Social Studies Methods

RM:ct

ENCLOSURES

THE OHIO STATE UNIVERSITY
COLLEGE OF EDUCATION
1945 NORTH HIGH STREET
COLUMBUS, OHIO 43210

Faculty of Science and
Mathematics Education

RECEIVED
MAY 9 1974
Project C. D. E. C.

May 8, 1974

Mr. Dennis M. Wint, Director
Center for the Development of Environmental Curriculum
4284 Center Street
Willoughby OH 44094

Dear Mr. Wint:

Enclosed you will find evaluations of all units I was asked to review.

Overall the materials have been of a quality I judge to be in the good to excellent range. Elementary teachers should be able to use many of the units regardless of whether their schools are organized on a self-contained or departmentalized basis. Many teachers will appreciate the appended background and instructional materials at the end of units.

I have welcomed the chance to react to the units developed under your direction. In my view you have created materials that should result in more and better attention given to Environmental Education in Ohio's Elementary Schools.

Congratulations for a job well done!

Sincerely,

Herbert L. Coon

Herbert L. Coon
Professor

HLC:ml

Enclosure

APPENDIX XLI

COMPARISON OF THE RESULTS OF THE UNITS INCLUDED IN THE CURRICULUM PACKAGE AND THOSE OMITTED FROM THE CURRICULUM PACKAGE AS PRINTED BY THE OHIO DEPARTMENT OF EDUCATION

ELEMENTARY EVALUATION RESULTS

COMPARISON OF THE RESULTS OF UNITS INCLUDED IN THE CURRICULUM PACKAGE AND THOSE OMITTED FROM THE CURRICULUM PACKAGE AS PRINTED BY THE OHIO DEPARTMENT OF EDUCATION

	TEACHERS			NON-TEACHERS			TOTAL		
	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd	Av. Resp.	% 1.00-3.00	% Exc/Gd
Units for grades 3-4									
Total Av. Rating	2.01	85.7	81.4	2.17	79.9	72.3	2.08	83.2	77.1
Av. Rating of one unit omitted in the printed pkg.	2.04	86.7	80.0	2.41	71.4	57.1	2.22	79.3	69.0
Av. Rating of ten units included in the printed pkg.	2.01	85.6	81.6	2.14	80.7	73.8	2.07	83.6	77.9
Units for grades 5-6									
Total Av. Rating	2.09	83.3	80.2	2.02	87.2	81.8	2.06	85.7	80.9
Av. Rating of the six units omitted in the printed package.	2.07	84.3	84.5	2.01	85.6	77.3	2.05	84.8	81.4
Av. Rating of the eight units included in the printed pkg.	2.11	83.3	77.0	2.03	88.4	85.2	2.08	86.4	80.6